

(19) World Intellectual Property  
Organization  
International Bureau



553647

(43) International Publication Date  
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number  
**WO 2004/090636 A1**

(51) International Patent Classification<sup>7</sup>: **G03F 7/027**

(21) International Application Number:  
**PCT/KR2004/000860**

(22) International Filing Date: 14 April 2004 (14.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2003-0023432 14 April 2003 (14.04.2003) KR

(71) Applicant (for all designated States except US): **MINUTA TECHNOLOGY CO. LTD.** [KR/KR]; San 56-1, Shilim-dong, Kwanak-gu, 151-742 Seoul (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KIM, Tae Wan**

[KR/KR]; #1-90, Sinkongduk-dong, Mapo-gu, 121-030 Seoul (KR). **YOO, Pil Jin** [KR/KR]; Samsung Apt. 113-1602, Songpa-2-dong, Songpa-gu, 138-172 Seoul (KR).

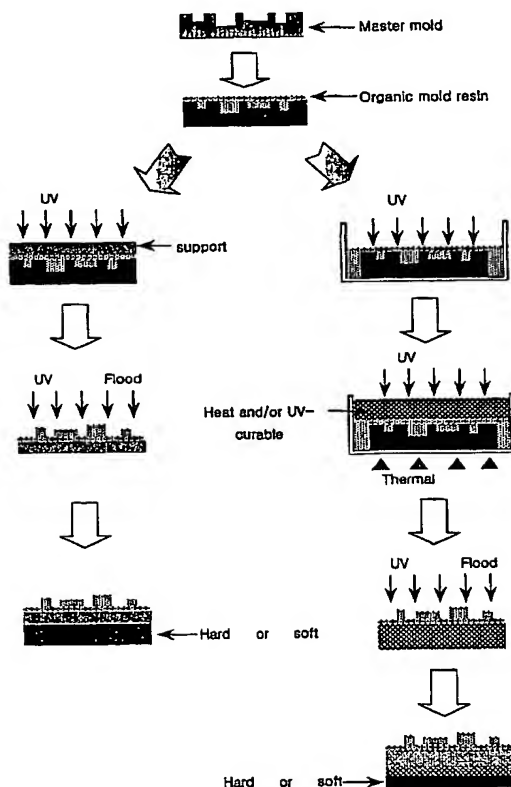
(74) Agents: **JANG, Seongku** et al.; 19th Fl., KEC Building, #275-7., Yangjae-dong, Seocho-ku, Seoul 137-130 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: **RESIN COMPOSITION FOR MOLD USED IN FORMING MICROPATTERN, AND METHOD FOR FABRICATING ORGANIC MOLD THEREFROM**



(57) Abstract: A resin composition for a mold used in forming micropatterns comprises (A) 40 to 90 parts by weight of an active energy curable urethane-based oligomer having a reactive group; (B) 10 to 60 parts by weight of a monomer reactive with the urethane-based oligomer; (C) 0.01 to 200 parts by weight of a silicone or fluorine containing compound, based on 100 parts of the sum of the components (A) and (B); and (D) 0.1 to 10 parts by weight of a photoinitiator, based on 100 parts of the sum of the components (A), (B) and (C). The inventive resin composition can be easily cured by the action of an active energy ray, and the organic mold fabricated therefrom is easily lifted off from a master without irreversible adhesion or generation of defects and have excellent dimensional and chemical stabilities.

WO 2004/090636 A1



Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*